

REMARKS

This is a full and timely response to the outstanding Office Action mailed April 22, 2003. Reconsideration and allowance of the application and presently pending claims 1-19 are respectfully requested.

1. Present Status of Patent Application

Upon entry of this response, claims 1-19 remain pending in the present application.

2. Response to Rejection of Claims 1, 2, 4-7, 9, 10, 12-14, 16, 17 and 19 Under 35 U.S.C. §102(b)

In the Office Action, claims 1, 2, 4-7, 9, 10, 12-14, 16, 17 and 19 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Merrill (EP 0 435 047 A2). It is well established at law that, for a proper rejection of a claim under 35 U.S.C. Section 102, the cited reference must disclose all elements/features of the claim. See, e.g., *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

a. Claim 1

Claim 1 recites:

1. A circuit transferring a charge from a source to a reference potential, said circuit being placed between said source and a circuit to be protected, comprising:
 - a transmission line coupling the source and the circuit to be protected;
 - a transistor comprising a base, an emitter, and a collector; and an electrical ground; wherein

the transistor is directly connected in reverse mode between the electrical ground and the transmission line.
(emphasis added)

The Office Action asserts that "Merrill discloses a clamping circuit 26 as part of an ESD circuit of Figure 2; which shows in, the 'lower' clamping circuit, an NPN transistor connected in a diode type connection of collector to Vss or ground, base through a resistance to ground, and the emitter to a pad 18, which has source inputs requiring protection," and that "this circuit could function without the trigger controls of circuit 24, which has an interface to the power-up of the overall chip assembly of a circuit 10; thereby, protecting pad 18 or equivalent network bus or transmission line, etc."

Applicant respectfully asserts that transistor and resistor of *Merrill*, referred to by the Office Action, is not connected to Vss. In fact, it is not clear to what the transistor and resistor are connected. Applicant respectfully asserts that, in stark contrast to the present invention, the transistor and resistor are shown to be floating in FIG. 2. Moreover, there is no description in the text of *Merrill* to indicate otherwise. In fact, there is no description in *Merrill* to indicate anything about the recited circuit.

Further, claim 1 recites a "transistor...directly connected...between the electrical ground and the transmission line." Applicant respectfully asserts that the transmission line, as described in the present invention connects the protected circuit to the pad. In stark contrast, the recited circuit of *Merrill* is connected to a pad 18, but is not connected to the protected circuit 10. This is not a transmission line as defined by the present invention. Instead, the pad 18 of *Merrill* is connected to the recited circuit and to a maze of field-effect transistors and diodes.

Moreover, these FETs and diodes mark the real ESD protection disclosed by *Merrill*. In effect, the logic for ESD 22 controls the switch 26 (unlabeled FETs shown in FIGS. 1 and 2). As contemplated by *Merrill*, the function of the ESD protective circuit would be destroyed without the logic 22 connected to the switch 26. Moreover, the Office Action modification would further necessitate the removal of the switch (unlabeled FETs). These switches are shown in both FIGS. 1 and 2, and are the very heart of the ESD protection of *Merrill*. If a reference would be "rendered inoperable for its intended purpose" when it is modified for use as prior art, then the reference "teaches away" and should not be used. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). As such, Applicant respectfully asserts that *Merrill* cannot be modified as asserted by the Office Action because it would destroy the intended purpose of *Merrill*.

b. Claim 2, 4-7, 9, 10 and 12

Because independent claim 1 is believed to be allowable over the prior art of record, dependent claims 2, 4-7, 9, 10 and 12 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that the dependent claims 2, 4-7, 9, 10 and 12 contain all features/elements of independent claim 1. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

c. Claim 13

Claim 13 recites:

13. A method of protecting a circuit from an electrostatic discharge comprising:
providing a bipolar junction transistor; and

coupling said transistor between the circuit and a pad coupled to the circuit, wherein,

said transistor is configured in reverse mode, the collector of said transistor being connected directly to ground.

(emphasis added)

The Office Action asserts that “Merrill discloses a clamping circuit 26 as part of an ESD circuit of Figure 2; which shows in, the ‘lower’ clamping circuit, an NPN transistor connected in a diode type connection of collector to Vss or ground, base through a resistance to ground, and the emitter to a pad 18, which has source inputs requiring protection,” and that “this circuit could function without the trigger controls of circuit 24, which has an interface to the power-up of the overall chip assembly of a circuit 10; thereby, protecting pad 18 or equivalent network bus or transmission line, etc.”

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d. Claims 14, 16 and 17

Because independent claim 13 is believed to be allowable over the prior art of record, dependent claims 14, 16 and 17 (which depend from independent claim 13) are

allowable as a matter of law for at least the reason that the dependent claims 14, 16 and 17 contain all features/steps of independent claim 13.

e. Claim 19

Claim 19 recites:

19. A circuit transferring a charge from a source to a reference potential, said circuit being placed between said source and a circuit to be protected, comprising:

means for transmitting electromagnetic signals coupling the source and the circuit to be protected;

means for switching electrical signals; and

an electrical ground; wherein:

said switching means is directly connected in reverse mode between the electrical ground and said transmitting means.

(emphasis added)

The Office Action asserts that “Merrill discloses a clamping circuit 26 as part of an ESD circuit of Figure 2; which shows in, the ‘lower’ clamping circuit, an NPN transistor connected in a diode type connection of collector to Vss or ground, base through a resistance to ground, and the emitter to a pad 18, which has source inputs requiring protection,” and that “this circuit could function without the trigger controls of circuit 24, which has an interface to the power-up of the overall chip assembly of a circuit 10; thereby, protecting pad 18 or equivalent network bus or transmission line, etc.”

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Merrill to indicate anything about the recited circuit. Therefore, Applicant respectfully asserts that *Merrill* does not teach, disclose or suggest all of the elements/features of claim 19, and the rejection should be withdrawn.

3. Allowable Subject Matter

Applicant would like to thank the Examiner for the indication that claims 3, 8, 11, 15 and 18 would be allowable if rewritten in independent form. However, Applicant respectfully asserts that in light of the foregoing arguments, all claims are allowable as written.

CONCLUSION

In light of at least the reasons set forth above, Applicant respectfully asserts that all objections and rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-19 are in condition for allowance. Favorable re-consideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

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